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ABSTRACT

Visual Literacy is a field that encompasses a variety of theoretical constructs and practical considerations relating to communicating with visual signs. The theoretical constructs that influence visual communication primarily fall into two closely interrelated categories: those that relate to the individuals involved in the communication process, and those that relate to the visual signs. The first category includes visual perception, hemispheric processes, mental imagery, and cognitive styles. The second category includes sign systems, visual languaging, image variables, and image analysis. The practical considerations include teaching about visual communication, relationships between visual and verbal learning, audiovisual materials in classroom teaching, and influences of media, especially television. Twenty-nine references are listed. (Author/LLS)

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# VISUAL LITERACY...

# AN OVERVIEW OF THEORY AND PRACTICE

by

Lucille Burbank DeSantis

and

Dennis W. Pett

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# Visual Literacy...an Overview of Theory and Practice

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Visual Literacy is a term coined to describe a variety of factors relating to communicating with visual signs. Defining visual literacy is comparable to the problem the six blind men faced when describing an elephant. The man who felt just the side of the elephant described the animal as being like a wall, while the man who felt the tusk said the elephant was like a spear. The men who felt just the trunk or tail or ear or leg were certain the elephant was like a snake, a rope, a fan, or a tree. Their descriptions depended on the part they were examining. Visual literacy is also different things depending on one's viewpoint. Here we look at some of the theoretical and practical aspects of visual literacy.

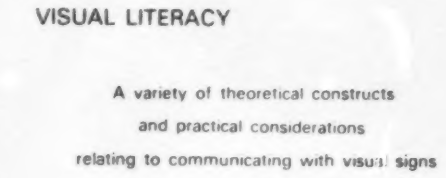
VISUAL LITERACY
A variety of theoretical constructs
and practical considerations
relating to communicating with visual signs

Figure 1

The theoretical constructs that influence visual communication primarily fall into two closely interrelated categories: those that relate to the individuals involved in the communication process and those that relate to the visual signs. The first category includes visual perception, hemispheric processes, mental imagery, and cognitive styles. The second category includes sign systems, visual languaging, image variables, and image analysis. These examples do not constitute all the theoretical influences on visual communications but they do represent those most frequently referred to by persons concerned with visual literacy.

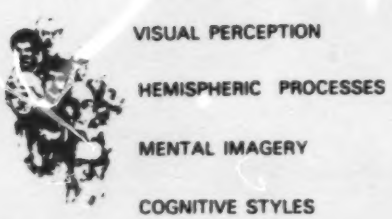


Figure 2

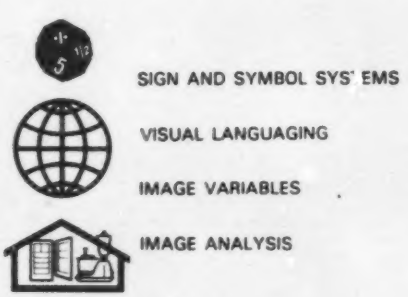


Figure 3

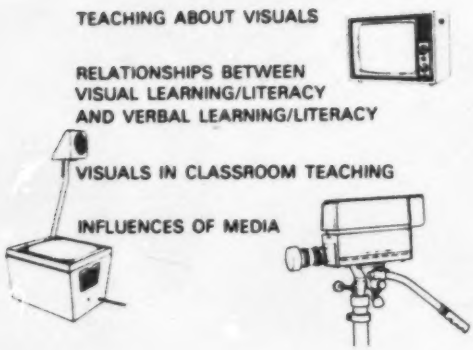
TEACHING ABOUT VISUALS
RELATIONSHIPS BETWEEN VISUAL LEARNING/LITERACY AND VERBAL LEARNING/LITERACY
VISUALS IN CLASSROOM TEACHING
INFLUENCES OF MEDIA

Figure 4

The practical considerations include such things as teaching about visual communication, relationships between visual and verbal learning, audio-visual materials in classroom teaching, and influences of media, especially television.

## Theoretical Constructs

### Visual Perception

A dictionary definition of perception is "awareness of the elements of the environment through physical sensation." Visual perception relates to the elements that we see. How we perceive influences how we learn, form concepts, solve problems, and think. In turn, our learning experiences change how we perceive. Fleming and Levie list four basic principles that affect perception and discuss in detail the application of these principles to the design of instructional materials (1978).

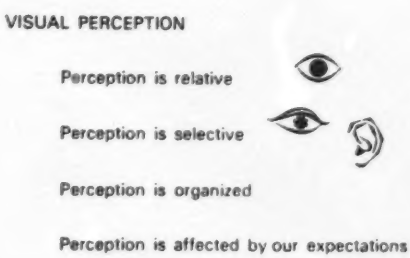


Figure 5

These basic principles as applied to visual communication are:

1. Perception is relative. We see things as they relate to other elements in our environment. Snow is called white on a sunny as well as a cloudy day, but the degree of whiteness is very different.

2. Perception is selective. At any given moment we pay attention to only a small part of the visual field. Our attention is affected by personal characteristics such as our interest at a particular time and on the character of things within the visual field, such as contrast, action, or color.

3. Perception is organized. As we perceive the many elements in a visual field, we organize them in ways that are meaningful. As an example, we usually divide a seven-digit telephone number into groups of three and four digits.

4. Perception is affected by our expectation. Design elements such as questions can focus audience attention and influence what is perceived. In addition, our past experiences and a variety of cultural factors influence the way we perceive things.

Fleming and Levie elaborate on these basic principles. They point out how designers of visual images can use these principles to develop materials that communicate more effectively.

## Hemispheric Processes

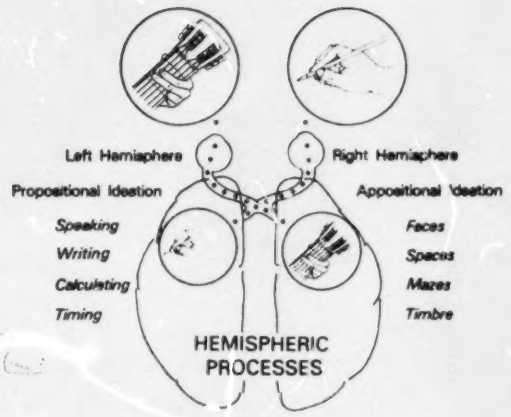


Figure 6

Today we are increasingly aware through the writings of J. E. Bogen (1975), Betty Edwards (1979), Richard Restak (1979), and others that there are profound functional differences between the left and right hemispheres of the brain. Studies have shown that the right hemisphere is usually better at configurational and spatial processing while the left hemisphere is usually better at linguistic processing. Configurational refers to the arrangement of parts or elements of things. We hear descriptors for the right side such as: simultaneous, holistic, intuitive, and synthetic. In contrast, the left side is said to be analytic, symbolic, sequential, and logical.

Bogen refers to the right side of the brain as appositional and the left as propositional (see Figure 6). He suggests that appositional functions do not follow characteristic rules of information processing for syntax or linguistic transformation. He describes appositionality as involving stimuli that are configurational, which accounts for the right hemisphere's propensity toward facial recognition and aspects of musical recognition and production, stimuli involving simultaneity, as in seeing things at the same time in simultaneous patterns as opposed to sequential order, and stimuli that incorporate integrative and holistic properties. Propositional functions are characterized with respect to language, reasoning, and symbolic thinking; i.e., speaking, writing, and calculating.

Cerebral hemispheric studies show that both hemispheres are involved in sophisticated thinking and reasoning operations. Each hemisphere has its own reality, and each can work independently of the other. Also, due to the crossover of nerve pathways, the left hemisphere controls the right side of our bodies and conversely, the right hemisphere controls the left side of our bodies (Edwards, 1979).

In his article, Some Educational Aspects of Hemispheric Specialization, Bogen (1975) wrote that users of information about the left and right halves of the brain tend to think in terms of the "kinds of materials" which each hemisphere handles instead of the way in which each hemisphere processes the materials of subject matter. For example, subject matter for the right side is spatial forms and for the left side it is words. Instead of thinking spatial forms for the right and words for the left, we should adjust our thinking to include the way each half processes its content. Bogen calls this "process specificity" as opposed to "material specificity." He suggests this kind of thinking in dealing with cognition as distinguished from perception.

Bogen also relates process specificity to the method of presentation or instruction typically used in education today. He notes that if we want

to provide more right-brain participation in the learning process, we would choose activities such as field visits and laboratory experiences over lectures and seminars.

In conclusion, Bogen expresses the principle virtue of these hemispheric studies as creating "new landmarks" for educators. These landmarks will enable educators to quantify their best efforts, test their skills, see where they have been, and at the same time seek new directions.

## Mental Imagery

As Fleming (1977) indicates, mental imagery research is providing a better understanding of the ways in which still pictures are perceived, stored, recalled, and used. Mental imagery can be related to verbal learning, pictorial learning, understanding, and concept formation.

There is a wealth of evidence to show that verbal learning can be greatly increased by mental pictures that combine a number of unrelated words (Paivio, 1978). The prodigious memory feats of ex-basbetball star, Jerry Lucas, are examples of this. In his book, Ready, Set, Remember, Lucas (1978) provides numerous examples of the visual images that he uses to cue verbal responses. Pictures are remembered more easily than words and there is a direct relationship between remembering a word, phrase or sentence and the degree to which a deliberately associated verbal statement can be pictured in the mind (Logan, 1976).

Many studies document the abilities of children and adults to recognize accurately pictures that they have previously seen. One study reports an accuracy rate of 90% for a group of subjects who were shown over 2,500 pictures at a rate of one every ten seconds (Standing, Conezio, and Haber, 1970). However, we do not yet know the pragmatic values of such research data. Classroom learning is not represented adequately by the pictorial stimuli and recognition tasks used in some research studies. Also, the relationships between mental imagery and verbal processes are not fully understood. We know very little about the ways in which imagery and various cognitive processes are related. Important questions remain unanswered; for example, how do learners, objectives, content, and various images interrelate?

The relationships between imagery and understanding have also been studied. There is contradictory evidence as to the degree that illustrations facilitate learning of text materials, but one study by Pressley (1976) showed that for a group of eight-year-olds, forming pictures "in the mind" after reading each paragraph of a story did increase verbal evidence that text information had been learned. This is consistent with the idea that learning is an active process...that we "learn by doing." Looking at textbook illustrations is less involving than creating a mental picture in the mind that is relevant to one's own experience. Perhaps this partially explains the success of some popular radio shows in the 1940s. Each listener created his or her own mental image of Buck Rogers and his spacecraft or the overloaded closet of Fibber McGee.

The role of imagery in concept formation is another area where there is increasing disagreement. Bruner, a psychologist concerned with developmental stages, characterized imagery as a stage that is outgrown as a child moves into the symbolic stage (Bruner, Oliver, & Greenfield, 1966). Fleming suggests that imagery strategies are developmental in nature, overlapping other developmental stages, and that instruction and practice in imagery strategies facilitate symbolic development (Fleming, 1977).

Further study of imagery can provide data that will influence the design of visual materials as well as the design of curricula for developing visual skills.

## Cognitive Style

Cognitive style is how a person acquires and processes information. It is the consistent approaches one uses when performing learning tasks (Ragan, 1978). There are a number of measures of cognitive style. Three are of particular importance (see Figure 7).

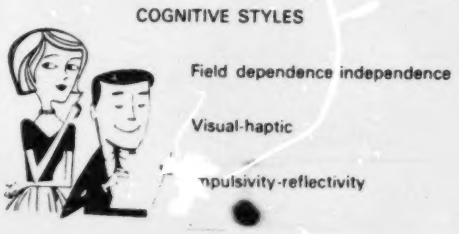


Figure 7

Field dependence-independence is the ability to see a figure that is embedded amongst other shapes and to visually separate this figure from its context; that is, to see the figure apart from its background. Figure 8 shows an example of a field dependence-independence test.

Look at the figure on the left.

Find it on the right.

Trace it with your finger.

How many times does it occur?

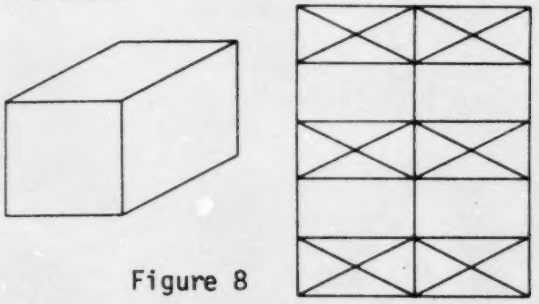

Figure 8

A person who acquires and processes information through a visual mode is said to have a visual cognitive style as opposed to a haptic style. A haptic learner has a kinesthetic and tactile orientation, an initial tendency to first rely on body movement and touch and then the eye to perceive the world.

A third cognitive style is described as impulsivity-reflectivity and relates directly to the meaning of the words. An impulsive learner approaches a cognitive task quickly and does not take much time to respond to problems. A reflective style is just the opposite; reflective

learners take longer to consider problems and are more likely to make correct responses than persons who have an impulsive style. It has been found that learners who are field independent, visual, and reflective tend to do better in school.

Ragan's article, Insights on Visual Capacities from Perceptual and Cognitive Styles, illustrates a connection between cogntive styles, perceptual development, and the role of visual literacy in education. Ragan states, "There is a complementary relationship between intellectual and perceptual development." He substantiates this relationship by citing Rudolf Arnheim's book, Visual Thinking, as saying that visual perception is a process involving the same behaviors as cognition or thinking. Ragan points out that the term, "cognitive style," is closely related to the term "perceptual style," and its foundation is in perceptual questions. Much of the early research on field dependence-independence was done by Witkin, who was concerned with perceptual processes (Ragan, 1978).

Ragan points out the variety of visual perceptual tasks required of a person completing an instrument that measures cognitive style. He concludes that if certain cognitive styles such as field independence, visual, and reflective are known to improve performance in school, then one role of visual literacy programs in schools can be to develop the visual perceptual skills of students. This in turn can contribute to intellectual development (Ragan, 1978).

## Sign and Symbol Systems

*ISOTYPE* is a systematic picture language created by Otto Neurath, an Austrian-born educator, social scientist, and scholar. He can be thought of as a founding father of the movement to create a universal pictorial language (Faulkner, 1979).

Neurath was not entirely preoccupied with creating a standardized system of visual symbols. He was primarily a visual educator and a perfectionist in message design. He designed his visual messages to communicate most of the important visual information at first glance and secondary information at another glance. The third time the viewer looks he should see a little more detail in the visual message. If he has to look again and again, the visual is not communicating effectively and should be redesigned. Examples of *ISOTYPE* symbols are shown in Figure 9. This language has influenced graphic symbol systems in use today (Faulkner, 1979a).

*BLISSYMBOLICS* is a pictorial language developed by Charles Bliss. The Bliss language is not as widely used nor as influential as Neurath's *ISOTYPE*; however, its story deserves to be told.

During World War II, Charles Blitz was captured and sent to a concentration camp.

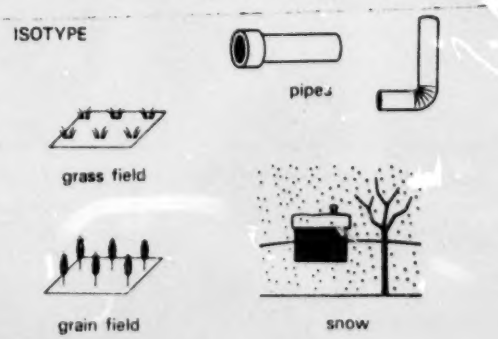


Figure 9

Miraculously, he escaped, fled to England, and changed his name to Bliss, as he is known today. Later Bliss traveled to Shanghai and there he saw how groups of people, each speaking a different language, were united by one written language; i.e., oriental picto-ideographic writing (Faulkner, 1979). This Shanghai experience encouraged Bliss to begin creating a written language that would unite the whole world--one language for all--a universal written language.

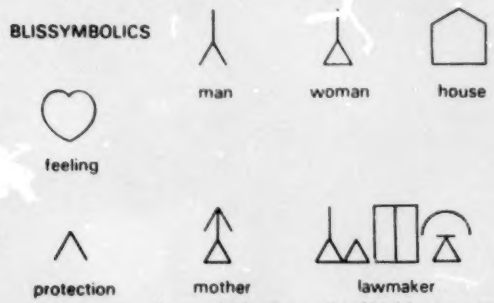


Figure 10

Bliss did complete this pictorial language. (Examples are shown in Figure 10.) However, his language did not succeed as a universal written language because many of its words are complicated to write and difficult for the beginner to decipher. As an example, look at the symbol for lawmaker.

In Bliss's language there are too many ideographs, symbols representing nontangible concepts or completely arbitrary symbols, and there are not enough pictographs, symbols resembling more the objects they portray, such as man, woman, or house.

Today, *BLISSYMBOLICS* is used at the Ontario Crippled Children's Center School in Toronto to communicate with cerebral palsied students. Also, in 1975, this center financed and created the Blissymbolics Communication Institute (BCI), located in Toronto. The Bliss language is used in special education around the world with various disabled groups--autistic and aphasic children, adult stroke victims, and the physically handicapped (Faulkner, 1979). Even though Charles Bliss did not succeed in creating a universal written language, his effort, drive, and persistence have contributed to our knowledge and understanding of symbols.

The International Council of Graphic Design Association (ICOGRADA) embodies the general purpose of bringing together graphic designers and their work, acting as a forum, in order to raise the standards of the profession and of graphic design around the world. Under the Commission on International Signs and Symbols, formed within ICOGRADA, the efforts to create global sign systems, attempted by Neurath and Bliss, have been researched and work continues on the guidance and coordination of developing more effective systems (Faulkner, 1979).

Concerning the creation of unified sign systems, the commission is seeking comparable answers to questions asked by Neurath and Bliss:

> Why do some signs communicate and others do not?
>
> What factors are necessary to the development of compatible, unified sign systems?
>
> How can these factors be identified?

ICOGRADA and its Commission on International Signs and Symbols is perhaps best known for its focus on creating a system that would cross all

boundaries, and in so doing the council hopes to set the sights of graphic designers on a higher and more humanistic plane of broader concerns and commitment to the design of sign and symbol systems that contribute to world communication and understanding.

## Visual Languaging

Visual languaging has been defined by Debes and Williams as "the intentional use of culturally acquired signs in culturally established patterns for the purpose of communicating." (Debes & Williams, 1978). In the earliest written languages, signs represented specific ideas; however, in most written languages today, signs represent sounds. Many Chinese signs represent ideas and therefore are a form of visual languaging. Another example of visual languaging is the sign system developed by Bliss, mentioned earlier. It is an artificial visual language that does not have a verbal equivalent.

At this level, sequences of pictures can be considered a visual language. The Winter Olympics were sponsored by "Kodak--America's Storyteller," an indication that pictures have linguistic characteristics. About 1950 at Indiana University, Henry Smith, Fine Arts Department, taught the similarities of digital and pictorial "languages." He developed a series of filmstrips centered around the theme that pictures include subjects (singular and plural), modifiers, and action elements that correspond to verbs. For example, a series of pictures involved a boy and his dog as subjects. In various pictures action elements were standing, walking, running, and jumping. Modifiers included such things as a grassy slope, trees, and a barn. In addition to realistic elements, we have come to accept a variety of visual conventions to represent movement in individual still pictures. Visual conventions such as cuts, fades, and dissolves are used in films and video production to represent changes in location or time.

Knowing more about visual languaging--how it is affected by culture and how it relates to the development of other language competencies--is essential in a world where we increasingly are bombarded by visual images.

## Image Variables

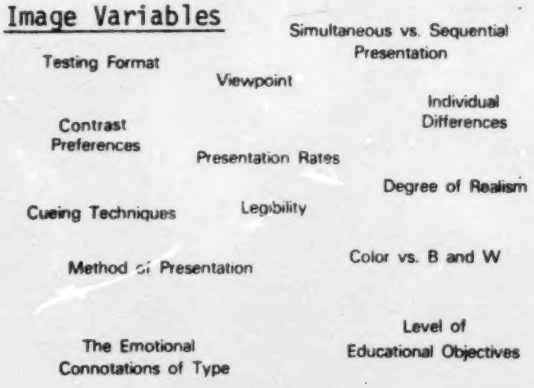


Figure 11

There are a number of image variables that must be considered when visualizing instruction such as cueing techniques, contrast preferences, legibility, emotional connotations of type, and degree of realism. Other interacting variables that educators need to be aware of include individual student differences, kinds of educational objectives, methods of presentation, and testing formats.

Let's look at a few examples illustrating image variables. The first one is an example of a cueing technique. The arrow cues the viewer to focus his eyes and attention on the key element of the visual.

Figure 12

Contrast preferences can range from low to high.

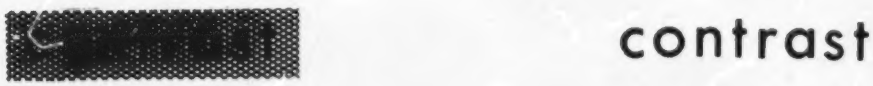


Figure 13

One aspect of legibility relates to presenting visual information using a negative or a postive treatment as seen in Figure 14.

Figure 14

In most cases, a postive format (black on white or light gray) is usually more legible than a negative one (white on black). However, when determining which approach to use, one must keep in mind the audience, objectives, and method of presentation.

Emotional connotations can be associated with different kinds of type styles (see Figure 15).

*Light*

*Airy*

**SOLID**

**BOLD**

This type style signifies a light feeling, perhaps of love or fancy.

This one gives a feeling of solidarity.

Figure 15

The degree of realism in a visual is a measure of how close it approximates reality. A black and white photograph of a situation, in this case two men working together, is closer to reality than a line sketch of the same situation.

Figure 16

If the black and white photograph were taken in color, it would be closer to reality and would be even more realistic.

The type of image used depends on individual differences in terms of age, IQ, reading comprehension, prior experience, and educational background; also, kinds of educational objectives; i.e., cognitive, affective, or psychomotor, method of presentation to an individual (self-paced) or to a group (externally-paced), and testing format, including traditional instruments (multiple-choice, true-false, fill-in, and performance), and visual testing which measures learning from visualized instruction.

Image variables and the other interacting variables must not be taken for granted by educators who often believe that learning naturally happens from visualized instruction. Each image variable must be considered individually as well as how it relates to the whole. Research results on such variables need to be disseminated so educators fully understand how image variables related to learning from visuals--when, how, and how much.

## Image Analysis

Figure 17

Important theoretical considerations in visual languaging relate to how people perceive, understand, and make judgments about still pictures. Art educator Gene Mittler describes four art criticism operations to be followed in developing students' judgments about a work of art: 1) Description refers to taking an inventory of the elements; 2) Analysis is determining how the elements have been organized; 3) Interpretation relates to determining the ideas and feeling that are communicated; and 4) Judgment is making decisions about the artistic values (Mittler, 1979).

These operations also apply in evaluating textbook illustrations, slides, or overhead transparencies. The first steps are to describe and analyze what elements are included, or not included, and how the elements are organized; then the ideas or feelings communicated can be determined and decisions made about the cognitive or affective values of the visual materials being examined.

These theoretical areas summarized are particularly relevant to the practical programs that have been the foci of a diverse group of persons associated with the field of visual literacy. Since the first Conference on Visual Literacy, conference participants have included language and art teachers, photographers, graphic artists, teachers in special education, media specialists, and theoreticians whose interests have tended to cluster into four related areas:

1. Teaching about visual communication
2. Relationships between visual learning and verbal learning
3. Visual materials in classroom teaching
4. Influences of media, especially television

## Practical Considerations

### Teaching About Visual Communication

Teaching about visuals traditionally has been the domain of art teachers concerned with developing skills to produce still pictorial images, as well as skills to analyze and make judgments about the qualities of such images. Drawing, painting, and photography classes, and classes in art appreciation have been available to children and adults for many years. Recently these activities have achieved greater importance by being included in curricula under the rubric of communication or visual education. One curriculum development project is in progress in

Australia; a team at the Salisbury College of Advanced Education has developed a curriculum and curricular materials for use by over 200 teachers in 30 schools (Hutton, 1980). Eight subject areas relating to visual education have been identified and guidebooks are being developed for each area. Currently this program and the initial versions of the curricular materials are being tested. A key feature of the program as described by Deane Hutton, the project director, is the emphasis on practicality combined with a sound theoretical basis. To quote Hutton, "A teacher may have practical skills in using the visual without the accompanying theory; but to have the theory without practice would leave him ill-equipped for the classroom."

SALISBURY COLLEGE CURRICULUM PROJECT

- Learning from Photographs
- Learning by Making Photographs
- Thinking and Communicating through Drawing
- Learning through Charts, Graphs, Maps and Diagrams
- Learning through Mental Imagery
- Learning through Visual Comparison and Analogy
- Learning from Films and Television
- Learning by Making Films and Videotapes

Figure 18

## Relationships Between Visual and Verbal Learning

Television's pervasive influence is one very important reason teachers need to look carefully at the relationship between visual and verbal learning. Debes points out that while IQ scores are increasing, SAT scores of the television generation are decreasing. He suggests that learning visual communication skills, processed in the right hemisphere of the brain, will optimize the use of verbal languaging abilities, primarily dealt with in the left hemisphere of the brain (Debes, 1976).

Presently, several programs designed to increase visual learning have been developed in conjunction with language arts curricula. One outstanding K-12 curriculum is being used in Milford, Ohio. Its purpose is to combine visual learning activities with perception exercises resulting in the production of visual materials that will impart to students a variety of visual communication abilities. Other comparable efforts are under way in public schools across the country and in special classes for the gifted and the handicapped. For example, classes of film study and television have multiplied enormously in the past ten years.

Research has shown that student involvement in visual communication activities can have a positive effect on linguistic development, can be useful as a communication technique for children with speech problems, and can positively influence the interest and self-concept of children who have experienced repeated failure in verbal learning tasks. In addition, visual learning can be directly tied into verbal learning in terms of relevance, editing, sequence, and unity.

## Visual Materials in Classroom Teaching

As the availability of audio-visual materials and hardware increases at all educational levels, teachers are making greater use of overhead

transparencies, slides, filmstrips, motion pictures, video, and other media. Making effective use of audio-visual materials involves three major phases: planning, producing, and presenting.

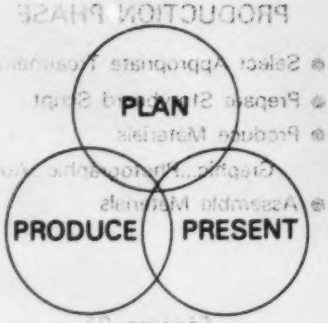


Figure 19

Planning involves four steps. First, the teacher must have a good understanding of the audience and the physical, social, educational, and psychological factors that influence how they perceive and react to various visual materials. Second, the teacher should know the objectives of the particular instructional situation. Are the objectives psychomotor, cognitive, affective, or some combination of these? Third, what specific content is to be communicated and how can it best be organized? Should the organization be chronological; should it be from simple to complex? Is some other organization more appropriate? Fourth, what instructional strategy should be used? Is an individualized approach best or can the instruction be handled in a group situation? What kind of media will best communicate the specific content to the audience and meet the objectives? (see Figure 20)

A wide range of media can be used in classroom situations for the following reasons:

- to give meaning to words and to develop meanings not easily verbalized
- to optimize learning for persons with varying abilities, learning styles and motivations
- to communicate more effectively and efficiently
- to use the specific attributes of a medium to meet requirements of different instructional strategies

PLANNING PHASE

- Identify Audience
- Determine Objectives
- Choose and Organize Content
- Select Appropriate Strategy

Figure 20

The production phase may be done commercially or materials can be produced by the teacher and in some instances by the learners. The first step in the production phase is determining the type of treatment. Will the

PRODUCTION PHASE

- Select Appropriate Treatment
- Prepare Storyboard Script
- Produce Materials
  Graphic...Photographic...Audio
- Assemble Materials

Figure 21

approach be serious or would a humorous approach be better? This will vary with the audience and the objectives. Next a storyboard script should be prepared. In the case of an overhead transparency this may be as simple as a rough sketch; for a complex slide set or a film, the storyboard may be a rather detailed step-by-step series of drawings of each slide or shot. The storyboard serves two functions. It provides a way of testing out ideas on a sample of the intended audience to determine if the materials contribute to reaching the objectives. The storyboard also serves as a guide for the person doing the art work or photography. The third step of the production process involves carrying out the details of making illustrations, doing lettering, taking pictures, and recording sound. The last step in the process is assembling the materials in the final format. This is a good time to evaluate their potential effectiveness by testing them with a sample of the audience and to check for accuracy by showing them to other teachers and subject matter specialists.

PRESENTATION PHASE

- Set up
- Rehearse
- Present

Figure 22

In the presentation phase, the teacher is concerned with setting up, rehearsing, and making the final presentation. This involves checking equipment such as the projector, screen, or tape recorder, as well as checking on room darkening and electrical power. It is necessary that everything works properly whether the presentation is to a group in a classroom or whether the learning situation is individualized.

Although there has been considerable research on message design variables as they relate to learners, little of this information has affected the development of typical classroom materials. Verbal elements are often overused, legibility standards are ignored, and visual quality is low compared with the creative images viewed on television. Because visual communication skills have not been taught, few producers are really prepared to create needed materials and few teachers have production skills or know how to evaluate and effectively use available materials.

## Influences of Media--Television

Television is a very pervasive and persuasive medium. It is our prime source of news and entertainment; it occupies much of our leisure time; and it has entered over 90% of American homes. The TV is on about six hours a day and each individual, on the average, watches it four hours. We are exposed to hundreds of advertising contacts in a day and a large share of these are through television. A high school student, by the time

he is 16 years old, has spent more hours in front of the "tube" than in the classroom. Television has done all this in a matter of 30 years. This is quite an accomplishment for a medium that is still relatively young, as compared, for instance, to the printing press.

Television's pervasiveness is comparable to the invention of the printing press, which spread verbal messages across the land, and now visual communication is as commonplace as printed material, in a much shorter period of time. Satellite technology extends this pervasiveness around the world and into space so that we become one global nation witnessing man's first spacewalk on the moon and gives television the largest simultaneous audience of all time. Advertisers spend billions of dollars on TV commercials because this medium is more persuasive and pervasive than billboard, magazine, or newspaper advertising. This is why of all the media influences, television is the most powerful; therefore it deserves the attention it is getting from persons concerned with visual literacy.

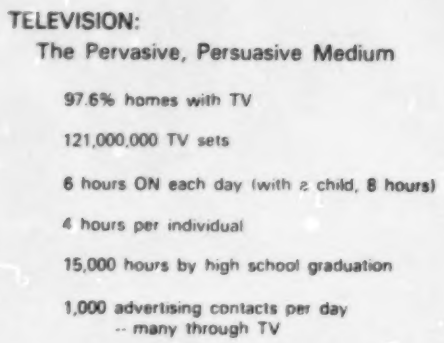
TELEVISION:
The Pervasive, Persuasive Medium
97.6% homes with TV
121,000,000 TV sets
6 hours ON each day (with a child, 8 hours)
4 hours per individual
15,000 hours by high school graduation
1,000 advertising contacts per day
-- many through TV

Figure 23

The whole world is watching this "window" onto the world, as was dramatized by the Vietnam War experience. Not only are we watching, but we tend to believe what we see on the screen and reality becomes what this window broadcasts to its viewers. For children, this aspect of television, believing and accepting what is seen as real, is significant because of the amount of aggression that is prevalent in programming for children and adults. Recent studies show that televised aggression may be a source of young viewers' ideas and can contribute to their actions. The younger the viewer, the more attention is paid to striking features of a program, such as aggressive acts or behavior (Harvey, 1976).

However, findings to indicate that just as children are attentive to televised aggression, they also pay attention to positive social acts and behavior. A study inspired by these findings and funded by various church groups was done. A series of public service spots were produced and sandwiched between regular children's programming. The prosocial message these 30-second spots carried to their viewers dealt with resolving conflicts in play situations in a cooperative manner. It seems the children understood the prosocial messages and in an experimental play situation they were able to respond constructively by working together on the conflict (Harvey, 1976).

Sesame Street has shown that programming for children can be good for them, can teach them and at the same time, be entertaining and hold their attention. Sesame Street's technique is to offer pieces of information in a commercial format; thus encouraging the preschooler to learn his

numbers and his alphabet in several exciting ways. Most of the research on Sesame Street has been done on the program's ability to teach cognitive skills, and little on how it affects the social development of preschoolers and their attitudes toward learning (Harvey, 1976). In other words, what do they learn about learning from Sesame Street? Do they learn that learning is always fun...or it should always be fun? Does Sesame Street create a utopian learning experience for the child that is unrealistic or cannot be consistently expected in everyday life?

Some recent studies have found that learning is increased when parents watch Sesame Street with their children, while unsupervised viewing and the lack of adult guidance and reinforcement lessens the program's effectiveness (Harvey, 1976). This leads to the realization that parental influence on a child's watching and use of television can be extremely powerful, giving parents an opportunity to share their attitudes and beliefs with their children. Parents can also, at this time, aid the child in his tightrope walk on the fine line between reality and fantasy by pointing out what is real and what is meant to be make-believe.

Television is not solely responsible for a child's action or change in behavior, but it can contribute significantly to and influence his social development and the socialization of all children. "All television is educational television, but what we must consistently question is: 'What is it teaching?'" (Harvey, 1976).

Much is known about visual communication, but much more needs to be discovered. As we examine the theoretical and practical considerations relating to visual literacy, we must remember that most visual communication through iconic representations (pictures) is accompanied by printed or spoken words as well as by sound effects or music. Space limitations preclude any discussion beyond the mention of these attributes of media. All teachers and media specialists need to be familiar with the theoretical concepts that underlie the ideas associated with visual languaging and must be aware of their practical applications in the instructional process.

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